

DOOR CLOSER

Abstract

A door closer comprises a housing defines an interior cavity. A spindle is journaled in the housing. At least a portion of the spindle extends from the housing and is connected to turn with a door. A cam is carried by the spindle for rotation with the spindle. A slide assembly includes a cam following roller for cooperating with the cam for converting rotation of the cam into linear movement of the slide assembly relative to the housing. A piston is disposed in a cylindrical recess and a piston rod connects the piston and the slide assembly. Spring means disposed outside of the housing urge the piston and slide assembly in the door closing direction. The spring means includes a spring rod connected to the piston. Passage means defined in the housing permit flow of fluid between the cylindrical recess and the cavity in a closed end of the housing in response to movement of the piston. Upon rotation of the spindle and cam in the door opening direction, the cam operates against the cam following roller for moving the slide assembly thereby compressing the spring means for storing energy. The spring means urges the piston and the slide assembly in the

opposite direction, and the cam following roller against the cam to rotate the cam and the spindle in the door closing direction.